# A - Proof

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| **How can you prove a number is prime by exhaustion?** | Prove 97 is a prime.  97 / 2 = 48.5, 97 / 3 = 32.333, 97 / 5 = 19.4, 97 / 7 = 13.86. We don’t need to go beyond 7 since 7 < sqrt(97) < 10. If there is a factor above 10, there must be one below 10. |
| **Conjecture** | The claim you’re testing. |
| **Consequence and equivalence** | * Consequence: A ⇒ B means if A is true then B is also true. * Equivalence: A ⇔ B means A implies B and B implies A. * Eg, x = -1 ⇒ x3 = x yet not ⇔ since x3 = x can also have x = 0, 1. |
| **Prove that sqrt(2) is irrational** |  |
| **Proving infinitely many primes** |  |